

Impact of regular consumption of unripe banana flour as functional ingredient on insulin sensitivity

Fabiana Andrea Hoffmann Sarda
University of Sao Paulo, Brazil

Unripe banana flour, rich in resistant starch, has been evaluated as functional food and its probiotics properties. The aim of this work was to evaluate the effects of regular consumption of unripe banana flour (UBF) as a source of resistant starch (RS) on insulin sensitivity. Healthy volunteers (n=30) participated in this double blind, parallel, placebo-controlled study, distributed into: Control group (malt dextrin) and UBF group (8 g), over 6 weeks of regular consumption (3 times/week). A standard 75 g oral glucose tolerance test (GTT) was performed at the beginning and end of dietary period. Glucose blood samples were taken at time 0, 30, 60, 90 and 120 min and venous plasma glucose and serum insulin levels were measured. Insulin sensitivity was assessed by homeostatic model assessment (HOMA). Fasting insulin concentration was significantly lower during the GTT following the resistant starch compared with the placebo and consequently there was a decrease in the calculated HOMA for insulin resistance for UBF group ($p=0,038$), with an improvement in fasting insulin resistance compared with placebo condition ($p=0,005$). The data showed significantly improved insulin sensitivity with UBF. This study showed that just six weeks of regular and discontinued resistant UBF starch intake significantly increased the insulin sensitivity in healthy individuals. Further studies exploring this effect in individuals with metabolic syndrome are required.

Biography

Fabiana Andrea Hoffmann Sarda studied Food Biochemistry at Faculty of Pharmaceutical Sciences at USP. Currently she is doing her Ph.D. in Food Science with emphasis on functional food (unripe banana flour - UBF) and its physiological effects on satiety, glucose homeostasis and intestinal microbiota, investigating the prebiotic potential of UBF.

fahsarda@usp.br